

*REMARKS*

Applicants have considered the Office Action dated May 22, 2007, and the references cited therein. Claims 1-8 and 13-18 are presently pending. No claims presently stand allowed. Applicants have amended the claims to clarify claim 3, delete independent claim 9 (without prejudice) and add dependent claim 18.

Applicants acknowledge the Office Action's indication that claims 14 and 15 would be allowable if re-written in independent form to eliminate reliance upon a rejected base claim. However, Applicants have not amended claims 14 and 15 to eliminate their dependency since the claims (1 and 3) from which they depend are also patentable for the reasons presented herein below.

The Office Action, at section 2, objects to the drawings because certain reference signs mentioned in the description (i.e., IMU, UC(0, ..., 4), RF(0, 1, 2), CN, SQ, FU(20, 21, 22), DEC, TSC, IRN, RN) are not identified in the drawings. Applicants previously removed/replaced these identifiers in response to a request in a previously issued Office Action. Applicants have not modified the drawings and instead respectfully request clarification of what requested since the two previous objections to the drawings appear to be in conflict.

Sections 3 and 4 of the Office Action raise issues regarding the patentability of claim 9 which is directed to an instruction set. Applicants traverse the rejection of claim 1 under 35 U.S.C. Section 101. However, Applicants have cancelled claim 9 without prejudice to subsequently resubmit claims directed to the novel instruction set.

Also, Applicants traverse the rejections of each and every one of the presently pending claims over the cited prior art. The Slavenburg, Hampapuram and Mehra references, neither alone nor in combination, disclose each of the recited elements of the claimed invention. Neither the Slavenburg reference nor the Mehra reference discloses *each issue slot comprising a plurality of functional units*. Applicants address the prior art-based rejections of the claims herein below.

Applicants, for the reasons presented herein as well as in Applicants' previous response, request favorable reconsideration of the Office Action's grounds for rejecting the

previously pending claims in view of Applicants' amendments to the previously pending claims and the Remarks provided herein below. Please charge any fee deficiencies to Deposit Account No. 12-1216.

*Summary of the Grounds for the Prior Art-Based Rejections*

1. Claims 1-4 and 6-12 are rejected as anticipated under 35 U.S.C. §102(b) in view of Slavenburg, U.S. Pat. No. 6,122,722 (Slavenburg).

2. Claims 1-4 and 6-12 are rejected as anticipated under 35 U.S.C. §102(b) in view of Mehra, U.S. Pat. No. 5,974,537 (Mehra).

3. Claim 5 is rejected as obvious under 35 U.S.C. §103(a) over Slavenburg in view of Hampapuram, U.S. Pat. No. 5,787,302 (Hampapuram).

4. Claim 5 is rejected as obvious under 35 U.S.C. §103(a) over Mehra in view of Hampapuram.

5. Claims 13, 16, and 17 are rejected as anticipated under 35 U.S.C. §102(b) in view of Slavenburg.

6. Claims 13, 16, and 17 are rejected as anticipated under 35 U.S.C. §102(b) in view of Mehra.

Applicants traverse each of the grounds for rejecting the presently pending claims for at least the reasons set forth herein below.

*Grounds 1&5. Applicants Traverse the 102(b) Rejections of Claims 1-4, 6-12, 13, 16, and 17 as Anticipated by Slavenburg*

Applicants traverse the rejection of **claim 1** because Slavenburg neither discloses nor suggests the recited "plurality of issue slots, wherein *each issue slot comprises a plurality of functional units*. Slavenburg discloses a plurality of issue slots (see, e.g., FIG. 4) and a plurality of functional units (see, e.g., FIG. 3). However, in contrast to the claimed invention, Slavenburg discloses a pair of switching matrices 401, 402 for multiplexing the issue slots

among various functional units. Slavenburg therefore does not disclose each *issue slot* comprising/including a plurality of functional units.

The Office Action, in response to Applicants' previous arguments, states:

"in Slavenburg's invention (fig. 4) it is seen that each "issue slot" (1 ... 3 in element 410) can "comprise" (contain) an instruction for any execution unit of fig. 3. Accordingly, each "issue slot" "comprises" "multiple functional units" because each issue slot of Slavenburg can issue instructions to more than a single functional unit as in the prior art."

Applicants submit that the above-cited portion of the Office Action evidences a misinterpretation of the corresponding element of claim 1. Rather than recite an ability to couple an issue slot's instruction to any of a plurality of shared execution units (disclosed in Slavenburg), Applicants' disclosed (see, e.g., FIG. 2) and claimed "issue slot" structures each comprise (contain) a plurality of functional units. Slavenburg discloses selectively associating/connecting shared functional units to a set of issue slots that do not, themselves, comprise the functional units. For at least this reason, Slavenburg does not anticipate the invention recited in claim 1.

Applicants furthermore submit that Slavenburg neither discloses nor suggests claim 1's recited "dedicated issue slot arranged for loading an immediate value in dependence upon a dedicated instruction comprising the immediate value." The Office Action asserts that the aforementioned claim element is disclosed by the CONST Type Slot 430 and CONST unit. However, the CONST unit does not have an immediate value. Instead, the CONST unit loads a binary value which is a concatenation of the opcode fields of the issue slot in which a CO unit operation was issued. Applicants submit that an opcode is an *instruction*, not data, and therefore would not fall within Applicants' defined/claimed "immediate value."

Applicants traverse the rejection of independent method **claim 8** for at least the same reasons stated herein above regarding claim 1 since claim 8 defines a method carried out by a plurality of issue slots including the structural limitations addressed herein above with regard to claim 1. Dependent **claims 2-4, 6-7, 13, 16 and 17** are patentable over Slavenburg for at least the reasons stated above regarding claims 1 and 8 from which each depends.

Furthermore, Applicants traverse the rejection of **claim 2** for at least the further reason that Slavenburg does not disclose a processing apparatus that includes a *single functional unit arranged for only executing the dedicated instruction* when read in combination with the elements recited in claim 1.

Furthermore, Applicants traverse the rejection of **claim 3** for at least the further reason that Slavenburg, in particular register 403, does not disclose a dedicated register file *dedicated solely* for storing the immediate value.

*Grounds 2&6. Applicants Traverse the 102(b) Rejections of Claims 1-4, 6-12, 13, 16 and 17 as Anticipated by Mehra*

Applicants traverse the rejection of **claim 1** because Mehra neither discloses nor suggests the recited "plurality of issue slots, wherein *each issue slot comprises a plurality of functional units*". The Office Action does not dispute that Mehra does NOT disclose each issue slot contains/includes a plurality of functional units. Instead, the Office Action has redefined Applicants' claimed "comprises" to mean "connects to" (a plurality of functional units). Applicants submit that such interpretation is contrary to Applicants' disclosure and unequivocal intention with regard to the presently claimed invention. When the term "comprises" is construed consistently with Applicants' disclosure and clear intentions (as evidenced by previous arguments), Mehra neither discloses nor suggests the recited limitation of "each issue slot comprises a plurality of functional units."

Applicants furthermore submit that Mehra neither discloses nor suggests claim 1's recited "dedicated issue slot arranged for loading an immediate value in dependence upon a dedicated instruction comprising the immediate value." The Office Action now asserts that the CONST unit (610) in Mehra corresponds to the aforementioned claim element. Mehra identifies the element 610 as an "operational parcel" which is not an "issue slot" as recited in claim 1. Furthermore, the operational parcel 610 can appear in any of the issue slots 521-523. Thus, none of the ISSUE SLOTS (521-523) can be considered to be the claimed *dedicated* issue slot arranged for loading an immediate value in dependence upon a *dedicated* instruction comprising the immediate value.

Applicants traverse the rejection of independent method **claim 8** for at least the same reasons stated herein above regarding claim 1 since claim 8 defines a method carried out by a plurality of issue slots including the structural limitations addressed herein above with regard to claim 1. Dependent **claims 2-4, 6-7, 13, 16 and 17** are patentable over Mehra for at least the reasons stated above regarding claims 1 and 8 from which each depends.

Furthermore, Applicants traverse the rejection of **claim 2** for at least the further reason that Mehra does not disclose a processing apparatus that includes a *single functional unit arranged for only executing the dedicated instruction* when read in combination with the elements recited in claim 1.

Furthermore, Applicants traverse the rejection of **claim 3** for at least the further reason that Mehra, in particular register 540, does not disclose a dedicated register file *dedicated solely* for storing the immediate value. In fact, Mehra specifically identifies register 540 as a *shared* multiport register file (the antithesis of a *dedicated* register file).

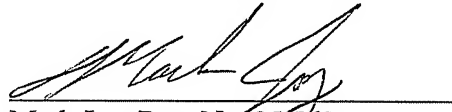
Furthermore, Applicants traverse the rejection of **claims 13 and 16** for at least the further reason that Mehra discloses elements 210, 410, and 610 that do not *consist* of an immediate value, as each includes a variable register ID.

*Grounds 3&4. Applicants Traverse the 103(a) Rejections of Claim 5 over Slavenburg/Mehra in view of Hampapuram*

Applicants traverse the obviousness rejection of claim 5 for at least the reasons submitted herein above with regard to the rejection of claim 1 from which claim 5 depends since multiple claim elements are neither disclosed nor suggested by the combined teachings of the prior art.

Applicants respectfully submit that the patent application is in condition for allowance. If, in the opinion of the Examiner, a telephone conference would expedite the prosecution of the subject application, the Examiner is invited to call the undersigned attorney.

Respectfully submitted,

A handwritten signature in dark ink, appearing to read "Mark Joy", is written over a horizontal line.

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